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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,278	11/19/2003	Syed F.A. Hossainy	50623-308	9988

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EXAMINER	
CHANNAVAJJALA, LAKSHMI SARADA	
ART UNIT	PAPER NUMBER
1611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/718,278	HOSSAINY ET AL.	
	Examiner	Art Unit	
	Lakshmi S. Channavajjala	1611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 13-28* is/are pending in the application.

4a) Of the above claim(s) *14-26 and 28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-11, 13 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Receipt of amendment, response and terminal disclaimers, all dated 2-11-10 is acknowledged.

Claims 1-11 and 13-28 are pending. Claims 1-11, 13 and 27 have been examined. Claim 12 has been canceled. Claim 12 has been canceled. Claims 14-26 and 28 have been withdrawn.

The following rejection of record has been maintained:

Claim rejections – 35 USC 103(a)

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-11, and 13, are rejected under 103(a) as being unpatentable over Llanos et al. (US Patent Publication No. 2002/0094440 A1; already made of record), in view of Carpenter et al. (US Patent Application Pub. No. 2004/0170685).

Llanos et al. (US Patent Publication No. 2002/0094440 A1) **biocompatible polymer coating compositions for coating implantable medical devices**, including stents, wherein said coating compositions are present on the surface of said device, wherein said surface is an inert surface to be in contact with body tissue of a mammal upon implantation of said device in said mammal (abstract; para. 0003-0004; and 0010). Llanos et al. teach that even though stents are commonly used in transluminal

procedures such as angioplasty to restore adequate blood flow to the heart and other organs, deployment of stents may stimulate foreign body reactions that result in thrombosis or restenosis (para. 0044). Llanos et al. teach coating compositions comprising a film-forming **polyfluoro copolymer** containing the polymerized residue of a moiety selected from the group consisting of vinlyidenefluoride and tetrafluoroethylene copolymerized with a second moiety other than the first moiety (abstract; para. 0010). Llanos et al. teach that bioabsorbable and biostable stent coating compositions generally comprise polymeric coatings that either encapsulate a pharmaceutical/ therapeutic agent (**e.g. taxol and rapamycin**) or bind such agent to the surface (e.g. heparin coated stents). See paras. 0006 and 0044-0047). Llanos et al. exemplify a stent coating composition comprising rapamycin and poly (VDF/HFP). See paras. 0014; 0030, 0044-0049, and Figure 4). Llanos et al. also exemplify coating compositions comprising polymer blends comprising a poly (VDF) homopolymer (= Solef 1008) and polyfluoro copolymers of poly (VDF/HFP), or Solef 11010 and 11008 (page 5, para 0039). Llanos et al. teach the instant claimed limitation "a." Specifically, Llanos et al. teach implantable medical devices, including stents, and biocompatible coating compositions for use on said implantable medical devices, wherein said coatings comprise a film-forming polyfluoro copolymer comprising the polymerized residue of a first moiety selected from the group consisting of vinlyidenefluoride (VDF) and tetrafluoroethylene (TFE), and the polymerized residue of a second moiety other than said first moiety and which is copolymerized with said first moiety; the second moiety being capable of providing toughness or elastomeric properties to the polyfluoro

copolymer (paras. 0010; 0015). Llanos et al. exemplify a coating composition comprising Solef, which is applicant's elected fluorinated polymer (page 5, Example 1; see also instant specification, page 1, para. 0015). Also, Llanos et al. also exemplify a coating comprising biologically active agents; namely, a polymeric coating composition comprising poly (VDF/HFP) and rapamycin (page 5, Example 3).

Although Llanos et al. teach implantable (e.g. stent) coating compositions comprising applicant's elected fluoropolymer species (i.e. Solef) and rapamycin, this reference does not teach coating compositions wherein the therapeutic agent (e.g. rapamycin) is conjugated specifically to instantly claimed biologically beneficial polymer (polyester amides). Carpenter teaches bioactive stents coated with biodegradable, bioactive polymers that promote endogenous healing process at the site of the stent implantation. In one embodiment, Carpenter suggests attaching the bioactive agent to polymers in order to promote healing process (0021), which hastens the healing process even before the biodegradation of the stent. Carpenter further suggests that a stent structure may be coated with a biodegradable, bioactive polymer p with a polymeric backbone so that the bioactive agent is produced in situ as a result of biodegradation of the polymer (0022). Fig. 1 and the description associated with figure 1 90032) describes a stent coated with outer layer of polymer loaded with a bioactive agent and an additional bioactive. For the bioactive agents, Carpenter suggests drugs such as rapamycin (0033). Beneath the outer polymer-drug layer is a resorbable polymer, which can be hydrophilic or hydrophobic depending on the nature of the drug (0034). Carpenter suggests polymer such as poly(ester amides) for imparting strength

and bioabsorbability (0036). The exemplified poly(ester amide) polymers include those that are recited in claim 11 (0067), where in the polymer of formula VI is of the same scope as that of instant claim 11. Carpenter states that the bioactive agents can be covalently bound to the bioactive polymers of structure VI by a wide variety of functional groups such as ester, amide, direct linkage etc (0077-0079; 0177-0181). Alternatively, Carpenter states that bioactive agent may be attached to the polymer via a linker such as polyethylene glycol (0080) for improved surface hydrophobicity of the polymer, accessibility of the polymer towards enzymatic activation and thus the release (0080, 0090).

It would have been obvious to a person of skill in the art at the time the invention was made to combine the teachings of Lianos with that of Carpenter. A skilled artisan would have employed the bioactive, biodegradable polymer of formula VI of Carpenter as a carrier to deliver a biologically active agent (e.g. rapamycin) along with the fluorinated polymers of Llanos for coating one or more bioactive agents such as rapamycin (Llanos or Carpenter) because Carpenter suggests coating stents with several layers of biodegradable polymers for sustained release of the active agent over a period of time in the natural healing process, where the bioactive and biodegradable polymer enables healing even before the biodegradation takes place (0036). Further, both Llanos et al. and Carpenter teach coating compositions for coating implantable medical devices (e.g. stent) comprising rapamycin and hence the motivation to combine their teachings flows logically.

While the poly (ester amide) of Carpenter does not contain the "Q" moiety of the polymer of instant claim 9, the polymer VI includes moieties M and P1. However, Carpenter suggests including a PEG linker to attach the bioactive agent to the polyester amide. Examiner notes that the instant claim 9 requires variables *m* and *n* be integers, which may be equal to 1. Carpenter suggests linking the polymer and the bioactive with PEG by a separation of 2 to 5 Angstrom units and also suggests ways of including the linker in the polymer (0087-0090). Accordingly, it is the position of the examiner that the methods of linking PEG to the polyester amide (taught by Carpenter) results in the claimed polymer of claim 9, in the absence of showing otherwise. A skilled artisan would have reasonably expected to achieve improved release of the drug over a period of time with the polymer VI of Carpenter and further would expect to improve the surface hydrophobicity of the polymer, accessibility of the polymer towards enzymatic activation and thus the release with the presence of PEG moiety in the polymer for linking the drug.

If applicants argue that the PEG in the instant claims is attached by a different method or orientation, then the burden is on the applicants to provide evidence or convincing explanation showing the same. If a prima facie case of obviousness is established, the burden shifts to the applicant to come forward with arguments and/or evidence to rebut the prima facie case. See, e.g., In re Dillon, 919 F.2d 688, 692, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990).

With respect to instant claimed "component (a)," it is noted that Llanos et al. teach stent coating compositions comprising applicant's elected fluorinated polymer

species (= Solef). Thus, Solef as taught by the prior art reads on the “component a" with respect to claims 1, and 3-6.

With respect to the product by process limitations recited in claims 3-5 regarding "component a," it is noted that the prior art teaches applicant’s elected “component a.” To the extent that the prior art teaches the identical instant claimed fluorinated polymer species (Solef), the process of preparing Solef is not found to provide structure to the composition because (Solef) as taught by the prior art is capable of performing the intended function.

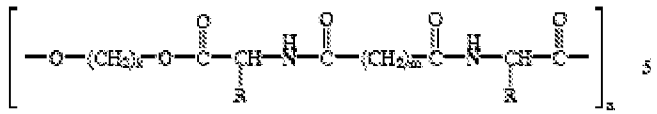
It is noted that rapamycin as taught by the prior art reads on claim 13 because claim 13 also recites "rapamycin."

It is noted that the instant application discloses that the term **“poly (ester amide)”** is defined as a polymer having at least one ester fragment (I) represented by O-C=O and at least one amide fragment (II) represented by –NH-C=O (page 7, lines 17-25). Thus, the poly(ester amides) as taught by Carpenter. overlaps with the instant claimed "poly(ester amide)" as recited in **claims 1 and 7**, and the term *“wherein poly(ester amides) include polymers having at least one ester bond and at least one amide bond"* as recited in **claim 8**With respect to the product by process limitation recited in claim 10, to the extent that the prior art teach poly(ester amide)-drug conjugates, for the reasons discussed above in connection with claims 7, and 8, the process by process limitation recited in claim10 is not found to provide structure to the instant claimed composition because poly(ester amide)-drug conjugates as taught by the prior art are capable of performing the intended function.

Thus, it would have been obvious to a person of skill in the art at the time the invention was made to create the instant claimed invention with reasonable predictability.

Claims 1-11 and 13 are rejected under 103(a) as being unpatentable over Katsarava et al. (US Patent 6,703,040) in view of Llanos et al. (US Patent Publication No. 2002/0094440 A1, and Carpenter et a (Carpenter), (US Patent Application Pub. No. 2004/0170685).

Katsarava et al. (US Patent 6,703,040) teach bioerodable polymer construct drug delivery systems to provide controlled release of bioactive materials comprising poly (ester-amide) polymers (PEA) (abstract). In particular, Katsarava et al. teach poly (ester-amides) that are non-toxic, wherein compounds having the below structure are preferred (col. 3, lines 1-23; and col. 5, lines 1-10;).



where
k=2–12, especially 2, 3, 4, or 6,
m=2–12, especially 4 or 8, and
R=$CH(CH_3)_2$, $CH_2CH(CH_3)_2$, $CH(CH_3)CH_2CH_3$, $(CH_2)_3CH_3$, $CH_2C_6H_5$, or $(CH_2)_2SCH_3$

Katsarava et al. teach PEA polymer blend may be used to provide a bioerodible coating on a support material which may or may not be biodegradable, including indwelling catheters, and any other appliances that are in contact with body cavities, the blood circulation, or the lymphatic circulation (col. 6, lines 34-65; col. 7, lines 1-22).

Katsarava et al. teach that bioactive and inactive biocompatible materials may be included in the erodable polymeric construct, including **antineoplastic agents** (col. 7, lines 23-49, especially lines 32-33). In particular, et al. teach naturally occurring biodegradable poly(ester amides) that are non-toxic and methods of synthesizing said non-toxic naturally occurring biodegradable polymers (col. 4, line 52 to col. 5, line 3).

Although Katsarava et al. teach PEA polymers that overlap with the instant claimed PEA polymers (e.g. lysine), this reference does not teach the instant claimed poly(ester amides) having the specific linking groups recited in claim 9 or 11 Katsarava also fails to teach fluorinated polymers,

The above discussions of Llanos et al and Carpenter et al. are incorporated by reference.

It would have been obvious to a person of skill in the art at the time the invention was made to modify the polyester amide polymer (VI) of Katsarava with that of Carpenter because carpenter suggests that the bioactive polymer linked to or conjugated to the bioactive agent enables faster endogenous healing process even before the polymer is biodegradable. Further a skilled artisan would have modified the stent of Katsarava by including the fluorine polymer suggested by Laos because Llanos suggests that the coating of a stent with fluorinated polymers provide a surface that does not stimulate unnecessary body reactions to the stern that results in restenosis or thrombosis and yet provide the delivery of a bioactive agent to the site of implantation.

It would have been obvious to a person of skill in the art at the time the invention was made to combine the teachings of Katsarava with that of Llanos and Carpenter. A skilled artisan would have employed the bioactive, biodegradable polymer of formula VI of Carpenter as a carrier to deliver a biologically active agent (e.g. rapamycin) along with the fluorinated polymers of Llanos for coating one or more bioactive agents such as rapamycin (Llanos or Carpenter) because Carpenter suggests coating stents with several layers of biodegradable polymers for sustained release of the active agent over a period of time in the natural healing process, where the bioactive and biodegradable polymer enables healing even before the biodegradation takes place (0036). Further, Katsarava, Llanos et al. and Carpenter teach coating compositions for coating implantable medical devices (e.g. stent) comprising rapamycin and hence the motivation to combine their teachings flows logically.

While the poly (ester amide) of Carpenter does not contain the "Q" moiety of the polymer of instant claim 9, the polymer VI includes moieties M and P1. However, Carpenter suggests including a PEG linker to attach the bioactive agent to the polyester amide. Examiner notes that the instant claim 9 requires variables *m* and *n* be integers, which may be equal to 1. Carpenter suggests linking the polymer and the bioactive with PEG by a separation of 2 to 5 Angstrom units and also suggests ways of including the linker in the polymer (0087-0090). Accordingly, it is the position of the examiner that the methods of linking PEG to the polyester amide (taught by Carpenter) results in the claimed polymer of claim 9, in the absence of showing otherwise. A skilled artisan would

have reasonably expected to achieve improved release of the drug over a period of time with the polymer VI of Carpenter and further would expect to improve the surface hydrophobicity of the polymer, accessibility of the polymer towards enzymatic activation and thus the release with the presence of PEG moiety in the polymer for linking the drug.

If applicants argue that the PEG in the instant claims is attached by a different method or orientation, then the burden is on the applicants to provide evidence or convincing explanation showing the same. If a prima facie case of obviousness is established, the burden shifts to the applicant to come forward with arguments and/or evidence to rebut the prima facie case. See, e.g., In re Dillon, 919 F.2d 688, 692, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990).

With respect to instant claimed “component (a),” it is noted that Llanos et al. teach stent coating compositions comprising applicant's elected fluorinated polymer species (= Solef). Thus, Solef as taught by the prior art reads on the “component a" with respect to claims 1, and 3-6.

With respect to the product by process limitations recited in claims 3-5 regarding "component a," it is noted that the prior art teaches applicant’s elected “component a.” To the extent that the prior art teaches the identical instant claimed fluorinated polymer species (Solef), the process of preparing Solef is not found to provide structure to the composition because (Solef) as taught by the prior art is capable of performing the intended function.

It is noted that rapamycin as taught by the prior art reads on claim 13 because claim 13 also recites "rapamycin."

It is noted that the instant application discloses that the term **"poly (ester amide)"** is defined as a polymer having at least one ester fragment (I) represented by O-C=O and at least one amide fragment (II) represented by –NH-C=O (page 7, lines 17-25). Thus, the poly(ester amides) as taught by Carpenter. overlaps with the instant claimed "poly(ester amide)" as recited in **claims 1 and 7**, and the term *"wherein poly(ester amides) include polymers having at least one ester bond and at least one amide bond"* as recited in **claim 8**With respect to the product by process limitation recited in claim 10, to the extent that the prior art teach poly(ester amide)-drug conjugates, for the reasons discussed above in connection with claims 7, and 8, the process by process limitation recited in claim10 is not found to provide structure to the instant claimed composition because poly(ester amide)-drug conjugates as taught by the prior art are capable of performing the intended function.

Thus, it would have been obvious to a person of skill in the art at the time the invention was made to create the instant claimed invention with reasonable predictability.

Claim 27 is rejected under 103(a) as being unpatentable over Llanos et al. (US Patent Publication No. 2002/0094440 A1; already made of record), in view of

Carpenter et al. (US Patent Application Pub. No. 2004/0170685), and further in view of and Smith et al. (US Patent 6,451,337).

The above discussions of Llanos et al and Carpenter et al. are incorporated by reference. These referenced do not teach diazenium diolates or diazenium diolate covalently bonded to the specific instantly claimed biologically beneficial polymer. Carpenter suggest including bioactive agents containing NO by themselves or in addition to rapamycin ((0011, 0048 & 0157).

Smith et al. (US Patent 6,451,337) teach polymeric coating compositions for use in implantable medical devices such as stents comprising polymeric conjugates of diazenium diolates, wherein said diazenium diolates possess beneficial properties (col. 3, lines 63 to col. 4, lines 3; col. 13, lines 62-67; and reference claims 6, 13-14). Smith et al. disclose that there remains a great need to develop a low cost, readily **biodegradable, biocompatibl**e nitric oxide donor polymer composition comprising a nitric oxide dimer and a medically beneficial carrier molecule capable of improved site specific delivery and controlled release of nitric oxide (NO) to target tissues under physiological conditions, without the further side effects of the nitric oxide donor compounds (col. 3, lines 63 to col. 4, lines 3). Smith et al. teach a chitosan-based polymeric composition capable of site specific delivery and controlled release of nitric oxide to target tissues comprising a modified chitosan polymer and a nitric oxide dimer, wherein the nitric oxide dimer is covalently bound to the modified chitosan polymer, forming a diazenium diolate (NONOate) derivative of the modified chitosan polymer (col. 6, lines 21-31). Smith et al. discloses that the chitosan-based nitric oxide donor

composition has first order nitric oxide release kinetics and provides site specific delivery and controlled release of nitric oxide under physiological conditions (col. 4, lines 51-62; col. 13, lines 11-41). Smith et al. teach that chitosan-based NONOate compositions wherein the composition further comprises a medically beneficial carrier (col. 8, lines 16-20). Smith et al. disclose that chitosan-based NONOate composition may be coated onto stents and implants useful for inhibition of platelet aggregation and adhesion to blood vessel walls following medical procedures (col. 13, lines 60-67).

It would have been obvious to a person of skill in the art at the time the invention was made to combine the cited references by substituting rapamycin as taught by Carpenter et al. or Llanos with the diazenium diolate-biodegradable polymer conjugate as taught by Smith et al., including applicant's claimed diazenium diolates-biologically beneficial polymer conjugates, for use in the implantable device coating composition as taught by Llanos et al. to treat a nitric oxide associated condition (abstract; col. 6, line 20 to col. 7, line 15). One would have been motivated to do so because Smith et al. suggest that diazenium diolate may be conjugated with any suitable biodegradable polymer carrier to deliver drugs to specific sites in the body to treat conditions wherein a NO donor is the preferred treatment and the biologically beneficial polymers as taught by the prior art and the instant claimed biologically beneficial polymers are also biodegradable polymers that are used to deliver drugs. Besides, Smith suggest that there is a great need for medically beneficial carrier molecule capable of improved site specific delivery and controlled release of nitric oxide (NO) to target tissues under physiological conditions, without the further side effects of the nitric oxide donor

compounds. Thus, one would reasonably expect that the genus of diazenium diolate-biodegradable polymer conjugates, including applicant's claimed diazenium diolates-polymer conjugate compounds, to exhibit similar binding properties absent evidence to the contrary.

Thus, it would have been obvious to a person of skill in the art at the time the invention was made to create the instant claimed invention with reasonable predictability.

Response to Arguments

Applicant's arguments filed 2-11-10 have been fully considered but they are not persuasive.

Applicants argue that instant fluorinated polymers (all three categories) are biodurable and non-degradable. It is argued that polymers taught by Llanos that are (1) hydrophobic and (2) non- degradable and Carpenter necessarily requires a coating made of a biodegradable polymer that imparts bioabsorbability. It is argued that Carpenter teaches away from using a biodurable polymer for forming a coating as is in Llanos and therefore the references are not combinable. Applicants' arguments are not persuasive because Llanos teaches that the biostable and non-degradable fluoro polymers may be employed as film-formers in coating medical stents and other implantable devices (0027). Among the implants, Llanos suggests that the devices may be both biostable and also bioabsorbable. In particular, Llanos teaches bioabsorbable polyesters among the suitable polymeric materials (0027) for coating. Carpenter

teaches bioabsorbable stents with drugs for enhanced healing. Thus, even though Carpenter teaches bioabsorbability, Llanos teaches the advantages of coating implants with bioabsorbable polymers such as providing an inert surface in contact with body tissues upon implantation reduce local turbulence in blood flow and prevent adverse tissue reactions in addition to delivering drugs. Further, applicants merely argue that the combination is not proper without any evidence to show that the combination suggested by Llanos (fluoro polymers with bioabsorbable polymers) is not proper.

Applicants argue that Katsarava describes a poly(ester amide) and teaches that such a poly(ester amide) polymer can be used to form a bioerodible coating on a supporting structure (col. 5, lines 1-3). It is argued that Katsarava teaches away from combining a poly(ester amide) polymer with a fluoro polymer in Llanos since all the fluoro polymers in Llanos are NON-ERODABLE. The above argument is not persuasive because Llanos suggests a combination of nondegradable stable polymers with bioabsorbable polymers.

Applicants argue that Smith desires biodegradable polymers as opposed to Llanos (biostable and biodurable) polymers. However, the teachings of Llanos have been clearly explained above and therefore, the rejection has been maintained.

The terminal disclaimers filed on 2-11-10 will be reviewed in due and applicants will be notified regarding their acceptance in the next action.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lakshmi S. Channavajjala whose telephone number is 571-272-0591. The examiner can normally be reached on 9.00 AM -5.30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila G. Landau can be reached on 571-272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lakshmi S Channavajjala/
Primary Examiner, Art Unit 1611
May 18, 2010